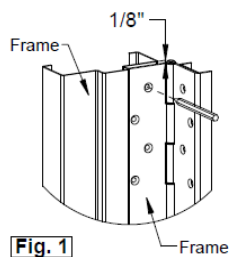




**Trademark  
HARDWARE**

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**Fig. 1**

### STEP 1. Frame Preparation

1. Place the hinge frame leaf on the frame. Position the top of the hinge 1/8" maximum below the header as shown (Fig.1). Place the hinge firmly against the rabbet of the frame.
2. Mark and center punch each hole on the frame with the hinge held firmly in place. For ease of installation, a center punch can help center the hole so that the fasteners will enter straight.
3. Remove the hinge from the frame and prepare to drill the frame.

**Wood frame:** drill all holes using a #28 or 9/64" drill bit

**Hollow Metal frame:** drill all holes using a #16 drill bit

• If hollow metal frame is reinforced, thread all holes with 12-24 tap

**Do not install the hinge to the frame at this time**

### STEP 2. Door Preparation

1. Position the hinge door leaf so that the top of the hinge is flush with the top of the door. Next make sure the return is up against the door face.
2. Mark and center punch each hole on the door with the hinge held firmly in place (Fig.2). Remove the hinge from the door and prepare to drill the door.
3. Drill holes:

#### Non Adjustable Hinge

**Wood Doors:** Drill all holes using a #28 or 9/64" drill bit

**Hollow Metal Doors:** Drill all holes using a #16 drill bit

• If hollow metal door is reinforced, thread all holes with 12-24 tap

#### Adjustable Hinge (If using Adjust-A-Screws™)

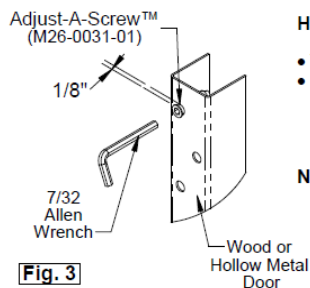
**Wood Doors:** Drill all holes using a #28 or 9/64" drill bit and then enlarge holes to 5/16" with a minimum depth of 1-3/8"

- Insert Adjust-A-Screws into every hole. Place a 7/32" Allen wrench in the opening of the Adjust-A-Screw (M26-0031-01) and turn the Adjust-A-Screw into the hole while keeping the screw properly aligned. Drive all the Adjust-A-Screws in until approximately 1/8" from edge of door (Fig. 3). (Adjust-A-Screw will self tap)

**Hollow Metal Doors:** Drill all holes using a #28 or 9/64" drill bit and then enlarge holes with 5/16" drill bit

- Thread all holes with 3/8-16 tap
- Insert Adjust-A-Screws into every hole. Place a 7/32" Allen wrench in the opening of the Adjust-A-Screw and turn the Adjust-A-Screw into the hole while keeping the screw properly aligned. Drive all the Adjust-A-Screws in until approximately 1/8" from edge of door (Fig. 3).

**Note:** It's not necessary to tap the holes in wood doors since Adjust-A-Screws cut their own threads. Do not be concerned with the tight fit. Adjust-A-Screws are designed for a tight friction fit in the tapped holes so they will not turn when the attachment screw is being tightened. If the Adjust-A-Screws turn too freely, apply Loctite™ to the threads during installation.



**Fig. 3**

All holes in the door and frame must be drilled correctly and fasteners properly installed.  
Failure to use the fasteners supplied by Markar Architectural Products, Inc. will void the UL or WHI fire rated listing.

### STEP 3. Hinge installation

#### 1. Attaching hinge to door:

- Peel backing from two sided tape located on the top and bottom of EGA305 hinge guard. Properly align the holes making sure the return is up against the door face and the EGA305 is flush with the top of the door. Stick guard to edge of door.

#### Non Adjustable Hinge (Fig. 4)

**Wood:** attach hinge using #12-8 x 1-1/2" Flat Head Particle Board Screws (PBS12150SP10SS).

**Hollow Metal:** Attach hinge using #12-24 x 7/16" Flat Head Undercut Machine Screws (MS1244SP10SS).

**Adjustable Hinge: (Fig. 5) Install the top & bottom four screws first, then close door to check alignment. See special note below**

**Wood & Hollow Metal:** Attach hinge using #10-32 x 3/4" Flat Head Undercut Machine Screws (MS10075SS).

**Special Note:** If the door is properly aligned, install and tighten the remaining screws. If the door requires alignment for proper fit, make this adjustment with the four screws installed without removing the door. Remove one screw and insert the Allen wrench through the hole into the Adjust-A-Screw (Fig. 5). Turn the Adjust-A-Screw in the direction desired for adjustment. One full turn of the Allen Wrench is equal to 1/16". Reinstall the screw. Adjust the remaining screws in the same manner. Close the door to verify if door is aligned properly in the opening. The balance of the Adjust-A-Screw should be adjusted in the same manner until all are resting firmly against the inside face of the hinge. Then install and tighten the remaining machining screws. Be sure the adjustable angle is pressed firmly against the face of the door as the screws are tightened.

#### 2. Attaching hinge to frame: (Fig. 6)

**Wood frame:** Attach hinge using #12-8 x 1-1/2" Flat Head Particle Board Screw (PBS12150SP10SS).

**Hollow Metal:** Attach hinge using #12-24 x 7/16" Flat Head Undercut Machine Screws (MS1244SP10SS).

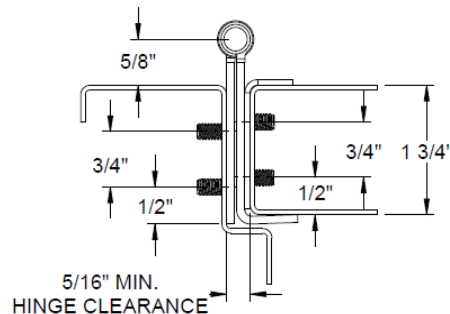
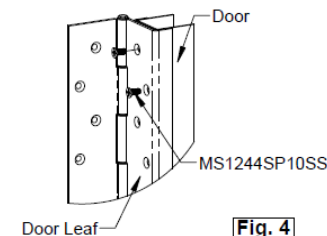
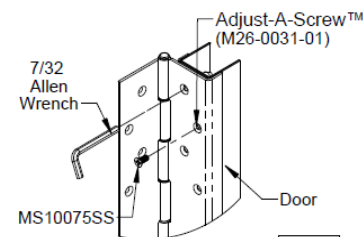


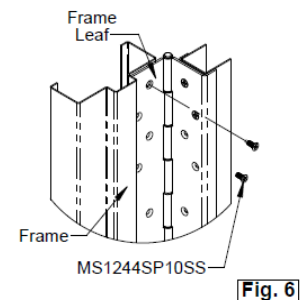
FIGURE 7: HINGE PLACEMENT & CLEARANCE TEMPLATE  
(NON- ADJUSTABLE APPLICATION SHOWN)



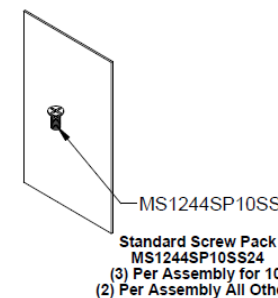
**Fig. 4**



**Fig. 5**



**Fig. 6**



Standard Screw Pack  
MS1244SP10SS24  
(3) Per Assembly for 10'  
(2) Per Assembly All Others

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**HG3505 INSTALLATION INSTRUCTIONS**

**M80-0180-03505**

Rev. C

**PRODUCT MUST BE INSTALLED  
ACCORDING TO ALL APPLICABLE  
BUILDING AND LIFE SAFETY CODES**

**INSTALLATION INSTRUCTIONS**

Page 1 of 1

Date: 03/01/13